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EPA Docket Center (EPA/DC)
Docket ID No. EPA-HQ-OPA-2006-0090
1200 Pennsylvania Avenue NW.
Washington, DC 20460

Subject: Docket ID No. EPA-HQ-OPA-2006-0090; Expert Public Commentary

To Whom It May Concern:

The Environmental Protection Agency ("EPA or the Agency") has proposed to amend Subpart J of the National Oil and Hazardous Substances Pollution Contingency Plan ("NCP") that govern s the use of dispersants, other chemical and biologic al agents, and other spill mitigating substances when responding to oil discharges into waters of the United States ("U.S.").

The EPA references the lessons learned in the BP America (BP) Deepwater Horizon oil spill in the Gulf of Mexico in 2010. The following comments are based on my field experience being on the ground deploying OPFLEX® technology (currently classified as a miscellaneous oil spill control agent, "MOSCA" by the EPA) as approved, ordered, re-ordered, and recycled via wringing and centrifuging by BP in 2010. There are many lessons learned upon which to comment.

Given my experience in other oil spills (another 35-plus since 2010), the EPA has encouraged me to submit suggestions and recommendations for the public commentary referenced above, which include water-quality testing.

Some of the other spills I have visited include but are not limited to the Mayflower, AR Pegasus pipeline heavy oil / diluted bitumen spill, Lac -Megantic, QC Bakken oil spill, Aliceville , AL Bakken oil spill, Lynchburg, VA Bakken oil spill, and Mount Carbon, WV Bakken oil spill. Exhibit A enclosed with this document is a map of the locations of the North-American oil spills I have visited from 2010 to the present.

As a general comment, as the EPA evaluates rule changes, it should consider the total carbon footprint of sorbents and the impact on the environment. Sorbents that are used once, that are not biodegradable, and that are discarded into a landfill or incineration facility can have a negative environmental impact. There are proven new technologies that were used in the Gulf of Mexico during the Deepwater Horizon spill that are recyclable and reusable, efficiently remove oil from water in all weather conditions and choppy seas, and are biodegradable when placed into a landfill at the end of product life. Exhibit B shows a statement made by BP on September 1, 2010 about the use of new Open-Cell elastomeric foam technology.

With regard to the EPA proposed revisions, which I read in its entirety, to Subpart J of the NCP, my following comments and recommendations are specific to sections upon which I have expertise:

B. Subpart A. – Introduction

1. Definitions

(A) Revised Definitions

Sorbents – Currently, there is no definition for a Sorbent category that meets the following 5 parameters:

1. Sorbents that are Open-Cell elastomeric foam sorbents that maximize surface area;
2. Sorbents that both absorb and adsorb oil and related chemicals and dispersants;
3. Sorbents that contain no plasticizers;
4. Sorbents that can be recycled and reused via a wringing or centrifuging process, and;
5. Sorbents that are biodegradable when placed in a landfill.

One such example of a technology that would meet all 5 parameters that is an Open-Cell elastomeric foam is OPFLEX, which was proven in the Deepwater Horizon Gulf of Mexico oil spill in 2010 as reported by the *USA Today* article. Link to article is here : http://usatoday30.usatoday.com/money/industries/environment/2010-11-15-gulfcleanup15_CV_N.htm

Specifically, what was learned from the Gulf of Mexico is the importance of maximum sorbent surface area to increase the amount of oil absorbed per square foot of material and to remove oil quickly (oleophilic) while maintaining positive buoyancy at full saturation with oil while not absorbing water (hydrophobic) and sinking. Furthermore, in rough or choppy seas the failure of conventional containment and sorbent booms is well known. A major lesson learned from disclosures from BP was the use of high surface area, Open-Cell elastomeric foam sorbents to mitigate shoreline oil impact during inclement weather conditions and choppy seas (which can also prevent conventional skimming). Again, Exhibit B is one of these disclosures from BP.

The most salient points from the lessons learned from the Gulf of Mexico and other spills are that maximum surface area as provided by the Open-Cell capillary network of the elastomeric foam along with customizable designs for specific environments are the most important parameters of removing oil from water efficiently.

The proposed EPA definitions are:

1. Natural Organic Substances.
2. Inorganic/Mineral Compounds.
3. Synthetic Compounds: this definition title should be changed to Synthetic Compounds – Solid / Non-Foam. This would be more consistent with the lessons learned from Deepwater Horizon and subsequent oil spills.

For completeness, an additional sorbent classification should be added as follows:

4. Synthetic Compounds - Open-Cell Elastomeric Foams – that contain no plasticizers, as plasticizers are known to be chemicals of concern including endocrine disruptors. All Open-Cell elastomeric foams would be classified in this category.

Particulate materials used in bulk form, such as clay and plastic microbeads, should be eliminated and not be included in the definition of sorbents. Field experience shows they cannot be totally collected and recovered like the traditional sorbents. Because clay and plastic microbeads are not 100% recoverable with unknown effects on wildlife and aquatic species, their use should be restricted. Additionally, EPA authorization of use requirements should be the same as other agents and tested for toxicity and efficacy prior to being used for spill response and oil mitigation. There are sorbents that recover the oil and are able to be collected and removed from the environment; therefore, other materials like clay and beads that cannot be collected and recovered from the environment should not be listed in the same category.

(C) Removed definitions

I support the removal of MOSCA category given that a subcategory is included in the Sorbent s definition to account for the uniqueness of Open-Cell elastomeric foams among the other sorbents.

C. Subpart J – Use of Dispersants and other chemical and biological agents

2. Authorization of use

(A) Use of agents identified on the schedule on oil discharges addressed by a preauthorization plan

The Area Committees (AC) should be responsible for developing the area contingency plan (ACP) and pre-authorization plans because they have local knowledge about what response techniques work best for their area. When there is no AC in place the responsibility for CPs and pre -authorization plan should fall back to the Regional Response Team (RRT). The ACs can consult with the RRTs for guidance in developing their ACP and pre-authorization plans.

The 30-day notification of withdrawal of approval of the pre-authorization plan should also include notification to the public. The public has a right to know if an agency no longer approves of a pre -authorization plan and the reason for that disproval.

(B) Use of agents identified on the schedule on oil discharges not addressed by a preauthorization plan

I agree with EPA that concurrence with Natural Resources Trustees is highly desirable; therefor e, EPA should make concurrence a requirement for agents not previously preauthorized. Natural Resources Trustees may have site specific knowledge and their concurrence should be mandatory to avoid additional environmental impacts of agent use.

(C) Burning Agents

The use of burning agents in spill response compromises environmental concerns. Burning agents merely shift the impact from water to air allowing the release of the toxins into the atmosphere instead of within the water column. The burning of oil does not constitute spill response when there are other methods such as using Open-Cell elastomeric foam sorbents that provide an avenue to contain and remove the oil without shifting it to another medium. In Situ Burning for spill response should only be used as a last resort. Adding fuel to an oil spill is not a valid method for cleaning up the spill. Burning agents like any other chemical agent added to the water should have the same requirements. They should have to pass toxicity and efficacy testing to be added to the product list.

(D) Exceptions

The 48 hour time frame should be changed to 24 hour s. With advances in communication technology including smart phones and e-mails, the OSC should be able to notify the EPA RRT and the DOC/DOI natural re source trustees within 24 hours and provide justification for using an agent that was not pre-authorized. In addition to the DOC/DOI natural resource trustees, OSHA and DHHS should also be included with the notification to account for human health related impacts.

(E) Prohibited Agent

There is much research available on ch emicals that are thought to be endocrine disrupting compounds (EDCs). While EPA does not have the specific validation efforts finalized, you should still prohibit agents which include ingredients that are potential EDCs from being listed on the product sch edule. Certain plasticizer compounds known to be present in conventional sorbents are known EDCs. Manufacturers of agents can then have ample

time to find an alternative ingredient that is does not have the potential to be an EDC. EPA should also prohib it agents that include ingredients found to be carcinogens, mutagens, and neurotoxins.

(G) Supplemental testing, monitoring and information

The OSC should require the responsible party to contract with a neutral third party to conduct additional water monitoring associated with the use of a product during a discharge incident. Having a qualified third party rather than the responsible party oversee the monitoring efforts will ensure that the data are not biased and remains objective.

(H) Recovery of agents from the environment

The responsible party or a responsible party's contractor, with OSC oversight, should recover the products from the environment. Allowing the responsible party to contract the work , with OSC oversight, will ensure that the recovery and removal of products is performed by the most qualified individuals deploying the best available technology. Products should be disposed of as hazardous waste, including oil and product combinations.

(I) Reporting of agent use

The reporting of agent us e should be mandatory, not just if requested by the NRT or RRT. The report should be submitted within 30 days of completion of the incident.

3. Monitoring the use of dispersants

As stated previously, it is recommended that the responsible party contract with a third party to conduct monitoring to ensure unbiased, objective, and accurate results. Monitoring should occur in both surface and subsurface waters when any chemical agents are used in any amount for the entire duration of the use and until no more chemical agents are detected within the water. Monitoring efforts are critical when any chemical agents are released into the water to understand the effectiveness of the agent on the response actions and the environmental impacts. By requiring monitoring with any agent use for any duration , more data will be collected allowing refinement of response actions. Furthermore, Open-Cell elastomeric foams (like OPFLEX) have been proven in their efficacy to remove dispersant and oil from the water column and can be used for both monitoring dispersants and/or in conjunction with dispersants in remediation. These Open-Cell elastomeric foams should be used in the entire water column to monitor and remove chemical agents along with oil and related chemicals from the spill source.

(A) Dispersant Application

EPA needs to clarify that the OSC has the final authority when deciding on dispersant application and rates, not the respon sible party. New technologies as proven in Deepwater Horizon lik e Open -Cell elastomeric foams should be used in conjunction with dispersants to mitigate biological and ecological damage.

(B) Water column testing

In almost all of the disasters, instantaneous grab water samples were used on surface wate r for a split second. This has led to false non -detects for chemicals of concern, when it turned out that dangerous oil and related chemicals were not only in the surface water, but throughout the entire water column too. Humans and organisms are not exposed to waterways for a split second only, and this is one of the reasons why there is a serious gap with the current form of instantaneous grab sample testing for water. Furthermore, this form of testing leads to wide variability in that if there is any air space and/or lack of timely preservatives / additives (like acids) placed into the

water sample there will be a non -detect result when contaminants are present. Also, the higher the flow rate of water the more variability there is in the split second grab samples as the contamination in the water is not always constant and contamination molecules can be missed for that split second. Finally, water-quality testing should require the testing for all Volatile Organic Compounds, Semi-Volatile Organic Compounds, and the full gamut of 33 metals and metalloids.

The solution to the problem of false non -detects experienced in the disasters with the current grab sample methodology is for the EPA to require the use of Open-Cell elastomeric foams as passive samplers ("Cumulative Samplers") to collect surface and subsurface / water column quality data, including exposure over time for contaminants. Cumulative samplers have already been proven in various disasters to not only detect the presence of chemicals of concern when grab samples showed non -detects, but to track exposure and absorption over time as a living organism experiences. Cumulative Samplers do not have any variability related to air space in the sampling container nor do they require the use of additives / preservatives as in grab samples. With Cumulative Samplers, either the chemical is present or not. This is a result of the molecular structure of the Cumulative Sampler that effectively attracts all chemicals of concern within its Open -Cell elastomeric foam matrix without releasing the chemicals of concern while repelling clear water.

Cumulative samplers allow for more detailed information in addition to the information obtained from an instantaneous grab sample. As we have learned during Deepwater Horizon and subsequent oil spills (like the Mayflower, AR Pegasus pipeline spill, Lynchburg, VA Bakken oil train spill, and Charleston, WV MCHM chemical spill to name just a few), instantaneous grab samples at only the water surface and related non -detects for chemicals of concern have led to water being declared as safe when the water was not safe and still had the presence of oil and related chemicals of concern (i.e., toxic solvents used in drilling fluids and/or transportation of the "newer" oil such as diluted bitumen and Bakken oil). In all these cases, Cumulative Samplers proved that there were still dangerous chemicals in the water and water column.

To avoid conflict of interest, the OSC should select a qualified third party for all water -quality testing including water-column testing. A third party should be required by law to disclose any and all previous work / relationships with the responsible party. The responsible party should not be able to influence, alter, or adjust any water testing results (including the selection of testing points) and the OSC should oversee transparency in this process. The OSC should contract a qualified third party (to be paid for by the responsible party) for sample collection and trajectory modeling to ensure accurate information.

(C) Oil distribution analysis.

I support the EPA's efforts to minimize excessive dispersant use and take protective measures with technologies that are proven to remove dispersants from the water and water column. Open-Cell elastomeric foams are among the technologies proven to remove dispersants from the water and water column.

(D) Ecological characterization

Clarify that the responsible party should contract with a natural resource trustee or qualified professional to characterize the ecological receptors to ensure accurate information. I support the requirement of using species sensitivity distribution (SSDs) for deriving ecotoxicity benchmarks (EBs), or the best available methods recommended by the experts in that field.

(E) Immediate reporting

EPA should require immediate reporting for deviations from the authorized dispersant rate for surface application in addition to subsurface applications.

4. Data and information requirements for product schedule listing

(A) General product listing

(3) Copy of the SDS required by OSHA under HAZCOM for the product

The safety data sheet (SDS) should be required for each component of a chemical ag ent that has known adverse health effects to protect worker safety. Efforts should be taken to avoid using products that have adverse health effects.

(5) Recommended product use procedures

Other elements to include in the rec ommended use procedures are: the training and PPE needs of the workers applying the product, health monitoring for the workers, whether the product requires special waste disposal , and whether the product is safe to use in sensitive areas such as near communities or water supplies.

(6) Environmental fate information

Testing for the products' bioconcentration, bioaccumulation, and biodegradation should be required for listing purposes. This information will ensure that the product wi ll be beneficial to the response actions and not ca use additional impacts to the environment. Thresholds for bioconcentration factor (BCF) and bioaccumulation factor (BAF) should be established for listing a product on the schedule to assist the OSC in authorizing use and establish safe application rates. The use of environmentally harmful products should be restricted in favor of more environmentally friendly response actions.

(9) Certification that bioremediation agents do not contain levels that exceed the National Ambient Water Quality Criteria lowest density value, bacterial, fungal, viral or opportunistic pathogens

EPA should establish listing thresholds for bioremediation agents. Agents that contain known pathogens, bacteria or fungi that are harmful to human s or environmental health should be inelig ible for listing so that their use does not cause additional harm to people or the environment.

(10) Certification that the product does not contain levels that exceed the National Water Quality Standards lowest acute value for aquatic life of the following contaminants: arsenic, cadmium, chromium, copper, lead, mercury, nickel, zinc, or any other heavy metal reasonably expected to be in the product; cyanide; chlorinated hydrocarbons; pesticides; polychlorinated biphenyls (PCBs); and polynuclear aromatic hydrocarbons (PAHs).

EPA should establish a listing threshold for products based on the National Water Quality Standards criteria for both acute and chronic standards. Products should be below the standards for all of the federal and state liste d contaminants. EPA should also consider whether there are any state standards that have stricter criteria and ensure that the product does not exceed those standards or established TMDLs for a particular water body . EPA should rank products based on thei r ability to not add additional contaminant to the water and give preference to the use of products that do not have contaminants in their ingredients and will not degrade the water quality.

(B) Dispersant testing and listing requirements

(1) Dispersant efficacy

EPA should also include unconventional oil and gas in the efficacy test and require testing for all agents listed on the product schedule. EPA should rely on the recommendations from the experts on the best accepted standard method to test for efficacy. The agents should be able to pass the efficacy test on all types of oil at a range of temperatures to be eligible for listing on the product schedule.

(2) Dispersant toxicity

EPA should include unconventional oil and gas in the toxicity tests and require testing for all agents listed on the product schedule. All tests should include the agent alone and the agent/oil combination. The EPA should require the submitter to conduct the oil-only toxicity test to give EPA the opportunity to detect anomalies in the submitted data. Acute and chronic toxicity tests should be performed on all agents. The chronic tests should be for durations longer than seven (7) days. Some of the dispersants were previously used for 90 days so the chronic tests need to reflect the actual usage. EPA should use longer -term tests to be representative of early -life stage developmental effects from long duration exposure at lower conc entrations. EPA should calculate toxicity thresholds with oil alone, oil-dispersant mix and dispersant alone to assist in comparing the relative toxicity. This information should be used as additional listing criteria. EPA should require RRTs to request the submitters to do geographically/ecologically representative species in their toxicity tests.

(3) Limitations of use

EPA should not allow use of dispersants in freshwater. Dispersants are problematic in freshwater and there have not been enough studies to show the impacts of their use in freshwater environments. More studies are needed before granting limited usage in freshwater.

(C) Surface washing agent (SWA) testing and listing requirements

(1) Surface washing agent efficacy

EPA should require ef ficacy tests for both freshwater and saltwater if the product is intended to be used in both since freshwater and saltwater have different properties.

(2) Surface washing agent toxicity

EPA should require another threshold toxicity test at 1ppm. Any agen t that cannot pass that test should not be eligible for listing because it is too toxic to be released into the environment. EPA should require toxicity tests with SWA-oil combinations to resemble what the aquatic life will encounter in their environment.

(D) Bioremediation testing and listing requirements

(1) Bioremediation agent efficacy

EPA should require an additional protocol specific to p roducts containing enzymes only, with that protocol consisting of exposure water, weathered oil and the enzymatic product to provide additional information about the efficacy of the product.

(2) Bioremediation agent toxicity

EPA should include an additional toxicity test at 1ppm. Agents that cannot pass the 1ppm test should not be eligible for listing. This test would provide additional safeguards to prevent the release of potentially toxic agents

into the environment. In addition, EPA should require toxicity tests with agent-oil combinations to replicate actual conditions of use.

(3) Listing of non-proprietary nutrients

EPA should not allow the addition of nutrients, which may contain unwanted pathogens and trace metals that could cause further degradation of the water quality. Products that require n utrient additions and additional proprietary components should have to follow the toxicity and efficacy protocols. EPA should not allow products with secret ingredients to be discharged into the water . All i ngredients of agents should be required to be disclosed in order to be included in the product schedule.

(E) Solidifier testing and listing requirements

(1) Solidifier efficacy

EPA should rely on recommendations from the experts and adopt efficacy protocols for solidifiers.

(2) Solidifier toxicity

EPA should include an additional toxicity test at 1ppm. Solidifiers that cannot pass the toxicity test should not be eligible for listing on the schedule. EPA should require solidifier-oil combination to the toxicity tests.

(F) Herding agent testing and listing requirements

(1) Herding agent efficacy

EPA should rely on the recommendation from the experts to develop efficacy protocols for herding agents.

(2) Herding agent toxicity

EPA should include an additional toxicity test at 1ppm. Herding a gents that cannot pass the test should be ineligible for listing on the schedule because they are too toxic to release into the environment. EPA should also include toxicity tests for herding agent-oil combinations to mimic the conditions at the actual time of use.

(G) Sorbent Requirements

1. EPA should add a sorbent category for Open-Cell Elastomeric Foams – free of plasticizers as plasticizers are known to be chemicals of concern including endocrine disruptors.
2. EPA should rely on recommend ations from the exp erts with real world experience and develop an efficacy test for sorbents. Parameters would include absorption amounts and rates of absorption.
3. EPA should require toxicity tests for any and all materials that are not removed from the environment following their use.
4. EPA should consider the total carbon footprint of sorbents, which takes into consideration recyclability, and reuse of the sorbents. Sorbents that are not biodegradable that fill landfills or are burned via incineration after one use have a significant negative impact on the environment relative to those sorbents that are proven to be recyclable and reusable along with recovering the oil from the water in the most efficient manner.

In tes ting the efficacy of sorbents, sorbents that absorb more oil and are reusable are also lower cost for the responsible party, which is funding the remediation .

5. Submission of confidential business information (CBI)

EPA should require submitters to disclose all chemical ingredients for a product to be listed on the schedule. No products on the schedule should be allowed to use secret ingredients and claim them as CBI.

6. Addition of a product to the schedule

EPA should require retesting whenever a product submits any change to its chemical components to be eligible for relisting on the product schedule. During the transition period, products that have submitted with the new protocols within 1 year should have preferential use over products that have not yet submitted.

8. Removal of a product from the schedule

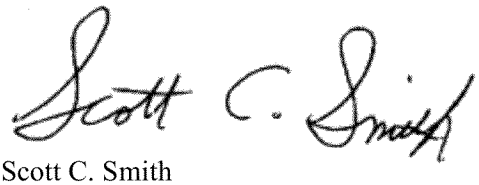
EPA should include a public process for petitioning for the removal of a harmful product from the schedule.

10. Appendix E to part 300

EPA should continue to offer guidance for oil spill response through other formats.

Thank you for the opportunity to comment on EPA's proposed changes to the N CP. Please contact me for additional information or clarification.

Sincerely,



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Enclosures

Exhibit A – Map of Oil Spills and Testing Sites

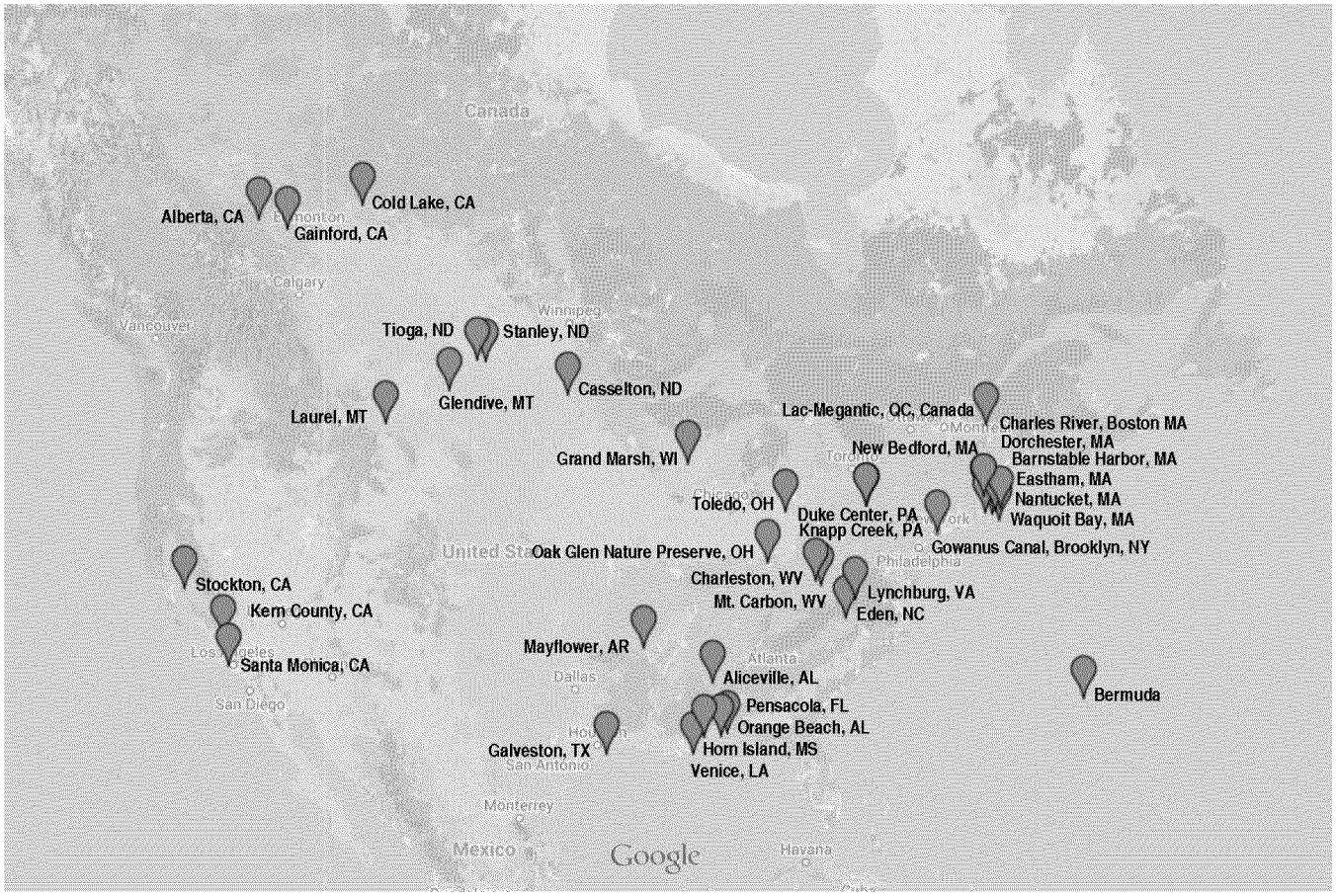

Exhibit B – BP Statement / Release September 1, 2010

DATE: September 1, 2010 9:42:04 AM CDT

Specialized foam takes on new role in Gulf cleanup

A polyolefin foam used in the medical and construction fields has taken on a new role as a powerful tool in BP's Gulf response efforts to remove oil from the water, shorelines, and marshes. The foam, called Opflex, allows water to flow through, but attracts and traps oil. It can be made in various shapes, including in pads to mop up oil from coastal marshes and in sausage-like rolls for deployment as offshore booms.

Scott Smith, chief executive officer of Cellect Plastics, the maker of Opflex, sees great potential for the product in oil cleanup and other water treatment applications that go beyond its original uses in the medical and construction fields.

"The advantage of Opflex is that it's buoyant open-cell foam that repels water while absorbing oil," says Smith. "It is 70% lighter than conventional booms, costs a fraction of conventional material, is biodegradable, and is highly efficient — absorbing 60 pounds of oil with a 12-foot boom."

"It's better than good," says Larry Hooper, who formerly served as captain of a charter fishing boat and now is providing BP with logistics support. "I've used it out in the ocean and the old-type booms can't come close to matching its performance."

Ken Rice has used Opflex-based pads in cleanup operations in the North Pass marshes of South Louisiana. "People love it once they get their hands on it," he says.

Another key feature is reusability. "Unlike conventional pads, which are considered hazardous waste after absorbing oil and must be disposed of in accordance with various government regulations, Opflex can be reused up to 100 times," says David Kinnaird, who led the first BP response team to evaluate the material.

Various methods for extracting the oil from the foam include using centrifuges or wringers similar to those on old-fashioned washing machines. After Opflex has collected the oil, the foam can be wrung out into a suitable container.

Early in the Gulf response, Kinnaird was impressed by a product demonstration of Opflex and contacted Lou Weltzer, who was stationed in the Critical Resources Unit in New Orleans with responsibility for evaluating cleanup materials. After receiving his own product demonstration, Weltzer placed an order for a truckload of the material. Subsequent orders from BP total about two million square feet. Weltzer also began contacting associates at other locations to spread awareness of Opflex's capabilities. Since the experience with BP, Smith has received an order from the Chinese government to assist in the Dalian Oil Port cleanup, as well as a range of other cleanup operations throughout the country, which continues to solidify Opflex's role as a new and effective method for oil spill cleanup.